

3. REMEDIAL DESIGN

3.1 Project Site

This section describes the remedial design for OU 1-10 Group 1 sites, which was developed in accordance with the engineering design criteria presented in Section 2. The civil design drawings and specifications for the action(s) are included in Appendix A and Appendix B. Until completion of the post-ROD sampling activities, the design drawings in Appendix A will be incomplete. Site preparation, excavation, native soil cover replacement, site restoration activities, monitoring, and O&M will be addressed following the physical site description below.

3.2 Physical Site Description

The Soil Contamination Area South of the Turntable is an open area bounded by the TSF fence on the west, and facility roads and several adjacent structures on the east and south. The site is approximately 205.8-m (675-ft) wide on the southern boundary and 129.6-m (425-ft) wide on the western boundary.

The Disposal Pond is a 14-ha (35-acre), unlined disposal pond southwest of TSF. A 1-ha (2.5-acre) portion of the pond is still in use and will undergo assessment when operations cease. Only 2 ha (5-acre) in the northwest corner and on the eastern edge of the pond have been contaminated. Historically, the pond received sanitary waste discharges, low-level radioactive waste, industrial wastewater, and treated sewage effluent. The active portion of the pond is permitted by the State of Idaho to receive only sanitary and industrial waste.

The site known as the PM-2A Tanks consists of the contaminated surface soil surrounding two abandoned underground storage tanks. The soil above the tanks was contaminated by spills containing radionuclides and hazardous constituents, including Cs-137, when waste was transferred from the tanks. Contaminated soil was removed in 1996, as part of the OU 10-06 removal action. What appeared to be the top of a wooden box was discovered at the PM-2A Tanks during the 1996 OU 10-06 removal action. Three soil stockpiles remain at the PM-2A Tanks after the OU 10-06 removal action because gamma radiation readings from the stockpiles were greater than allowed by the project work control documentation at the time. Sampling following the removal action indicated an area of 30.5 m (100 ft) by 21.3 m (70 ft) to 5.2 m (17 ft) bgs contaminated with Cs-137 (DOE-ID 1999).

3.3 Site Preparation

The areas directly associated with the remedial actions of the Soil Contamination Area South of the Turntable and PM-2A Tanks will be cleared of vegetation in accordance with Specification 02110 (Appendix B). Fencing surrounding the immediate contaminated areas will be removed, if necessary. Radiation surveying will occur at the Soil Contamination Area South of the Turntable and at the PM-2A Tanks.

3.4 Earthwork

All earthwork at the Soil Contamination Area South of the Turntable and PM-2A Tanks involving excavation and backfill will be graded to encourage drainage away from the excavation (see Specification 02200, Earthwork in Appendix B). All areas that are disturbed by earthwork activities will be revegetated per the project specifications. Standard dust control measures (water spray, stop work during high winds, etc.) will be employed during all earthwork.

3.4.1 Soil Contamination Area South of the Turntable (TSF-06, Area B)

Earthwork at the Soil Contamination Area South of the Turntable will involve excavation of contaminated soil to a maximum of 3 m (10 ft) or the depth at which contaminant concentrations are above the FRG, whichever is less. The contaminated soil will be transported to the proposed ICDF or another disposal facility on or off the INEEL. Confirmation samples will be collected to verify that the remedial action met the FRG. The excavation will be backfilled with clean native soil and seeded to reestablish native vegetation.

3.4.2 PM-2A Tanks Site (TSF-26)

Earthwork at the PM-2A Tanks will involve excavation of contaminated soil to a maximum of 3 m (10 ft) bls or the depth at which contaminant concentrations are above the FRG, whichever is less. Radiological screening will be used to segregate soil that is less than the FRG from soil that exceeds the FRG. The contaminated soil will be transported to a disposal facility on or off the INEEL. Confirmation samples will be collected to verify that the remedial action met the FRG. Where confirmation sampling of the excavated areas indicates that contamination greater than the FRG remains below 3 m (10 ft) from surrounding land surface elevation, these areas will be backfilled with 0.15 m (0.5 ft) of clean native fill, pending additional excavation or backfilling during the Group 2 remedial action. The remainder of the PM-2A Tanks area will not be backfilled at this time; at the completion of the Group 2 remedial action at this site, the entire area within the TSF-26 fence will be brought up to surrounding grade and reseeded.

3.5 Warning Signs

Institutional controls (DOE-ID 2000a) will include warning signs that will be installed at the Disposal Pond to warn potential users of the underground contamination present in this area. Activities will be controlled by use of MCPs, Public Notices, DOE Orders, and DOE-ID Directives on Institutional Controls.

3.6 Surface Water

Contouring and grading of backfilled excavations will be performed to maintain existing surface water flow patterns at the Soil Contamination Area South of the Turntable and the PM-2A Tanks. Revegetation of the backfilled excavations will encourage drainage without erosion (Specification 02140, Appendix B, "Temporary Diversion & Control of Water During Construction").

3.7 Erosion Protection

The backfilled excavations will be vegetated in accordance with the *Guidance for Revegetation of Disturbed Areas at the Idaho National Engineering Laboratory* (DOE-ID 1989). All backfilled excavations will be sloped above grade to divert surface water and minimize erosion.

3.8 Construction

A construction laydown and stockpile area will be necessary at each site to stage equipment and materials close to the work. The staging areas will be located so that noncontaminated materials and equipment operate in work areas isolated from contaminated material and equipment. A temporary decontamination area for personnel and equipment decontamination will be established at the control point for each area, in accordance with the decontamination requirements of the project HASP. Spill prevention and control will be maintained for the staging areas.

3.9 Operation and Maintenance

Details of the O&M for the Soil Contamination Area South of the Turntable (TSF-06, Area B) PM-2A Tanks (TSF-26) are found in the OU 1-10 O&M plan (DOE-ID 2000c).

4. HUMAN HEALTH AND ENVIRONMENTAL COMPLIANCE

4.1 Remedial Action Objectives

The RAOs for OU 1-10 were developed in accordance with the National Contingency Plan and are based on the results of the human health risk assessment. The RAOs are based on the results of the human health risk assessment and are specific to the COCs and exposure pathways developed for OU 1-10 (see Table 4-1). As outlined in the OU 1-10 ROD (DOE-ID 1999), the RAOs for TSF-06 Area B, TSF-26, TSF-07, and WRRTF-13 are:

- Reduce risk from external radiation exposure from Cs-137 to a total excess cancer risk of less than 1 in 10,000 for the hypothetical resident 100 years in the future and the current and future worker
- Prevent exposure to petroleum hydrocarbon constituents in accordance with the State of Idaho RBCA Guidance.

To meet these objectives, FRGs were established. These goals are quantitative cleanup levels based primarily on ARARs and risk-based doses. These FRGs will be used in the remedial actions as described in this work plan.

4.2 Applicable or Relevant and Appropriate Requirements

Under CERCLA Section 121, response actions conducted entirely onsite are exempt from obtaining federal, state, or local permits. However, these actions must comply with the substantive aspects of the ARARs specified for the site. Tables 4-2 through 4-5 summarize how the substantive requirements of the ARARs and to be considered requirements for the Soil Contamination Area South of the Turntable (Table 4-2), Disposal Pond (Table 4-3), PM-2A Tanks (Table 4-4), and Fuel Leak site (Table 4-5) have been addressed by the remedial design or will be addressed during the remedial action.

Table 4-1. Summary of RAOs to OU 1-10 Group 1 Sites.

Remedial Action Objective	TSF-06, Area B Soil Contamination Area	TSF-07, Disposal Pond	TSF-26, PM-2A Tanks Site	WRRTF-13 Fuel Leak
Reduce risk from external radiation exposure from Cs-137.	Exposure to penetrating radiation prevented by removing radionuclide contamination from the site.	Exposure to penetrating radiation will be prevented by limiting access to the site.	Exposure to penetrating radiation will be prevented by removing radionuclide contamination from the site.	N/A
Prevent exposure to petroleum hydrocarbon constituents in accordance with RBCA.	N/A	N/A	N/A	Potential for exposure eliminated by removal of soils exceeding RBCA cleanup levels.

Table 4-2. Compliance with ARARs for the Soil Contamination Area South of the Turntable (TSF-06, Area B).

ARAR/TBC	Substantive Requirement(s)	Reason	Relevancy (A or R&A) ^a	Compliance Strategy
<i>Action-Specific ARARs</i>				
Rules for the Control of Air Pollution in Idaho	"Toxic Substances" IDAPA 16.01.01.161	The release of carcinogenic and non-carcinogenic contaminants into the air must be estimated before start of construction, controlled if necessary, and monitored during excavation and sorting of soil.	A	Based on past sampling of the PM-2A site (source of contamination for the TSF-06, Area B site) no toxic substances as addressed in Appendix D.
	"Toxic Air Emissions" IDAPA 16.01.01.585 and .586			
	"Fugitive Dust" IDAPA 16.01.01.650 and .651	Requires control of dust during excavation, sorting, and removal of the soils.		Dust suppression measures will be implemented as necessary during the remedial action to minimize the generation of fugitive dust. These measures may include water sprays, keeping vehicle speeds to a minimum, and work controls during periods of high wind.
	"Requirements for Portable Equipment" IDAPA 16.01.01.500.02	Portable equipment for sorting and removal of the soils, and any portable support equipment must be operated to meet state and federal air emissions rules.	A	The use of any portable equipment will comply with IDAPA 16.01.01.500.02.
NESHAPs	"Radionuclide Emissions from DOE Facilities" 40 CFR 61.92	Limits exposure of radioactive contamination release to 10 mrem/yr for the offsite receptor, and establishes monitoring and compliance requirements.	A	Radionuclide emission calculations and air modeling for this project are presented in Appendix D. The model result is estimated at 4.4E-04 mrem/yr dose at the site boundary. Therefore, monitoring will not be required.
	"Emission Monitoring" 40 CFR 61.93			
	"Emission Compliance" 40 CFR 61.94(a)			

Table 4-2. (continued).

ARAR/TBC	Substantive Requirement(s)	Reason	Relevancy (A or R&A) ^a	Compliance Strategy
RCRA – Standards Applicable to Generators of Hazardous Waste	“Hazardous Waste Determination” IDAPA 16.01.05.006 (40 CFR 262.11)	A HWD is required for the soils and any secondary waste generated during remediation.	A	A hazardous waste determination per MCPs will be completed. The INEEL WDDF will satisfy requirements of 40 CFR 262.11.
	“Manifest” ^b IDAPA 16.01.05.006 (40 CFR 262 Subpart B)	Establishes requirements for transporting hazardous waste to a treatment and/or disposal site. Applies to any soils and secondary waste considered RCRA hazardous.	A	A manifest will be used to ship hazardous waste out of the TAN/TSF
	“Pre-Transportation Requirements” ^b IDAPA 16.01.05.006 (40 CFR 262.30 – 262.33)			
RCRA – Standards for Owners and Operators of Hazardous Waste Treatment Storage and Disposal Units	“General Waste Analysis” ^b IDAPA 16.01.05.008 (40 CFR 264.13[a][1-3])	Analysis requirements apply only to RCRA hazardous soils and secondary waste generated during remediation.	A	Samples will be obtained to determine whether any waste material generated meets the acceptance criteria at the disposal facility.
	“Security of Site” ^b IDAPA 16.01.05.008 (40 CFR 264.14)	If the soil site is determined to be RCRA hazardous, measures must be taken to restrict access to the site during removal of soils and decontamination of equipment.	A	INEEL and WAG 1 security measures, such as access restrictions, will be implemented during remediation activities. Danger and Warning signs will be posted.
	“General Inspections” ^b IDAPA 16.01.05.008 (40 CFR 264.15)	If the soil site is determined to be RCRA hazardous, regular inspections must be performed during remediation.	A	Routine inspections will be conducted during and following remediation. The information obtained will be incorporated into the annual institutional control monitoring report. Additionally, postremediation inspections will be conducted as part of O&M activities.
	“Personnel Training” ^b IDAPA 16.01.05.008 (40 CFR 264.16)	If the soil site is determined to be RCRA hazardous, all personnel involved in soil excavation and sorting must be trained.	A	Personnel will be trained in hazardous waste management requirements.

Table 4-2. (continued).

ARAR/TBC	Substantive Requirement(s)	Reason	Relevancy (A or R&A) ^a	Compliance Strategy
	<p>“Preparedness and Prevention”^b IDAPA 16.01.05.008 (40 CFR 264 Subpart C)</p>	Applies to soil excavation and decontamination activities if the soil site is determined to be RCRA hazardous.	A	Emergency equipment will be available when handling/managing hazardous waste.
	<p>“Contingency Plan and Emergency Procedures”^b IDAPA 16.01.05.008 (40 CFR 264 Subpart D)</p>	Applies to soil excavation and decontamination activities if the soil site is determined to be RCRA hazardous.	A	The substantive requirements of a contingency plan will be maintained.
	<p>“Equipment Decontamination”^b IDAPA 16.01.05.008 (40 CFR 264.114)</p>	All equipment used during remediation must be decontaminated if RCRA hazardous waste is contacted.	A	Equipment will be decontaminated to remove hazardous waste.
	<p>“Use and Management of Containers”^b IDAPA 16.01.05.008 (40 CFR 264.171 – 177)</p>	Applicable to RCRA hazardous soils and associated hazardous secondary waste generated remediation that is managed in containers.	A	Only containers that are compatible with the waste generated will be used. Containers will be inspected routinely.
RCRA – Land Disposal Restrictions	<p>“Land Disposal Restriction Treatment Standards”^b IDAPA 16.01.05.011^b (40 CFR 268.40[a][b][e])</p>	Any secondary waste generated that is considered RCRA hazardous must be treated if necessary to meet land disposal restriction criteria before disposal.	A	The RD/RA waste management plan for OU 1-10 WAG 1 addresses compliance strategy. Sampling will be conducted per FSP. Any soil that falls within RCRA compliance that does not comply with land disposal restrictions will have to be treated prior to disposal.
	<p>“Treatment Standards for Hazardous Debris”^b IDAPA 16.01.05.011 (40 CFR 268.45 [a][b][c][d])</p>		A	The RD/RA waste management plan for OU 1-10 WAG 1 addresses compliance strategy. Sampling will be conducted per FSP. Any soil that falls within RCRA compliance that does not comply with land disposal restrictions will have to be treated prior to disposal.

Table 4-2. (continued).

ARAR/TBC	Substantive Requirement(s)	Reason	Relevancy (A or R&A) ^a	Compliance Strategy
	<p>“Universal Treatment Standards”^b IDAPA 16.01.05.011 (40 CFR 268.48[a])</p>		A	The RD/RA waste management plan for OU 1-10 WAG 1 addresses compliance strategy. Sampling will be conducted per FSP. Any soil that falls within RCRA compliance that does not comply with land disposal restrictions will have to be treated prior to disposal.
	<p>“Alternative Treatment Standards for Contaminated Soils”^b IDAPA 16.01.05.011 (40 CFR 268.49)</p>	Any excavated soils considered RCRA hazardous must meet the land disposal restriction standards for contaminated soil before disposal in an approved facility on the INEEL or off the INEEL.	A	The RD/RA waste management plan for OU 1-10 WAG 1 addresses compliance strategy. Sampling will be conducted per FSP. Any soil that falls within RCRA compliance that does not comply with land disposal restrictions will have to be treated prior to disposal.
	<p>“CERCLA Off-Site Policy”^b (40 CFR 300.440)</p>		A	Any offsite TSD receiving hazardous waste will be certified to have offsite authority.

Table 4-2. (continued).

ARAR/TBC	Substantive Requirement(s)	Reason	Relevancy (A or R&A) ^a	Compliance Strategy
<i>To-Be-Considered</i>				
Radiation Protection of the Public and the Environment	DOE Order 5400.5 Chapter II (1)(a,b)	The DOE Order limits the effective dose to the public from exposure to radiation sources and airborne releases.		Job safety analyses and/or radiological work permits will be prepared for tasks where there is the potential for exposures to radioactive contamination/materials. Radiological work permits will be used only as determined by the radiological control technician, based on the INEEL <i>Radiological Control Manual</i> (INEEL 1996).
Institutional Controls	Region 10 Final Policy on the Use of Institutional Controls at Federal Facilities	Applies to contamination left in place or remaining above 1E-04 risk.		An institutional control plan will be developed after the submittal of the institutional controls status monitoring report. An institutional control monitoring report is required on an annual basis.
<p>a. A = Applicable, R&A = Relevant and Appropriate</p> <p>b. This ARAR will not be applicable if a no-longer contained-in determination is approved by IDEQ for the site.</p> <p>NESHAPs = National Emission Standards for Hazardous Air Pollutants</p> <p>IDAPA = Idaho Administrative Procedures Act</p>				

Table 4-3. Compliance with ARARs for the Disposal Pond (TSF-07).

ARAR/TBC	Substantive Requirement(s)	Reason	Relevancy (A or R&A) ^a	Compliance Strategy
<i>Chemical-Specific ARARs</i>				
NESHAPs	"Radionuclide Emissions from DOE Facilities" 40 CFR 61.92	Limits exposure of radioactive contamination release to 10 mrem/yr for the offsite receptor, and establishes monitoring and compliance requirements.	A	The radiation work permit will define requirements for monitoring to ensure that the spread of contamination does not occur. No construction or excavation activities will take place within the contaminated area.
	"Emissions Monitoring" 40 CFR 61.93		A	The radiation work permit for this site will address the requirements necessary to ensure that the spread of contamination does not occur.
	"Emissions Compliance" 40 CFR 61.94(a)		A	
RCRA – Standards Applicable to Generators of Hazardous Waste	"Hazardous Waste Determination" IDAPA 16.01.05.006 (40 CFR 262.11)	A HWD will be required for samples taken to obtain a no-longer contained-in determination.	A	A HWD per MCPs will be completed. The INEEL WDDF will satisfy requirements of 40 CFR 262.11.
RCRA – Standards for Owners and Operators of Hazardous Waste Treatment Storage and Disposal Units	"Security of Site" ^b IDAPA 16.01.05.008 (40 CFR 264.14)	Measures must be taken to restrict access to the site for as long as direct exposure to hazardous contamination is possible.	R&A	INEEL and WAG 1 security measures, such as access restrictions, will be implemented.
	"General Inspections" ^b IDAPA 16.01.05.008 (40 CFR 264.15)	Regular inspections of the site are required for as long as direct exposure to hazardous contaminants is possible.	R&A	Inspections will be conducted during and following remediation. The information obtained will be incorporated into the annual institutional control monitoring report. Additionally, postremediation inspections will be conducted as part of O&M activities.

Table 4-3. (continued).

ARAR/TBC	Substantive Requirement(s)	Reason	Relevancy (A or R&A) ^a	Compliance Strategy
<i>To-Be-Considered</i>				
Radioactive Waste Management	DOE Order 435.1	The DOE Order provides guidance on disposal of low-level radioactive waste at DOE facilities.		Radiological personal protective equipment and decontamination water will be managed in accordance with the INEEL, Reusable Property, Recyclable Materials and Waste Acceptance Criteria and the INEEL <i>Radiological Control Manual</i> . Decontamination water may be discharged to the area of contamination with the approval of the radiological control technicians and environmental restoration project manager. Sampling and field screening efforts to identify radionuclide-contaminated soils above action limits will minimize waste material/handling.
Radiation Protection of the Public and Environment	DOE Order 5400.5 Chapter II (1)(a,b)	The DOE Order limits the effective dose to the public from exposure to radiation sources and airborne releases.		Job safety analyses and/or radiological work permits will be prepared for tasks where there is the potential for exposures to radioactive contamination/materials. Radiological work permits will only be used as determined by the radiological controls technician, based on the INEEL <i>Radiological Control Manual</i> (INEEL 1996).
Institutional Controls	Region 10 Final Policy on the Use of Institutional Controls at Federal Facilities	Applies to contamination left in place or remaining above 1E-04 risk.		An institutional control plan will be developed after the submittal of the institutional controls status monitoring report. An institutional control monitoring report is required on an annual basis.
<p>a. A = Applicable, R&A = Relevant and Appropriate</p> <p>b. This ARAR will not be applicable if a no-longer contained-in determination is approved by IDEQ for the site.</p> <p>NESHAPs = National Emission Standards for Hazardous Air Pollutants</p> <p>IDAPA = Idaho Administrative Procedures Act</p>				

Table 4-4. ARARs for the PM-2A Tanks (TSF-26) selected remedy.

ARAR/TBC	Substantive Requirements	Reason	Relevancy (A or R&A) ^a	Compliance Strategy
<i>Chemical-Specific ARARs</i>				
Rules for the Control of Air Pollution in Idaho	"Toxic Substances" IDAPA 16.01.01.161	The release of carcinogenic and noncarcinogenic contaminants into the air must be estimated before start of construction, controlled (if necessary), and monitored during soil excavation, waste removal, treatment (if performed), and tank decontamination.	A	Based on past sampling of the PM-2A site (source of contamination for the TSF-06, Area B site) no toxic substances were detected. Therefore, air modeling was not conducted for toxic substances as addressed in Appendix D.
	"Toxic Air Emissions" IDAPA 16.01.01.585 and .586			
NESHAPs	"Radionuclide Emissions from DOE Facilities" 40 CFR 61.92	Limits exposure of radioactive contamination release to 10 mrem/yr for the off-Site receptor, and establishes monitoring and compliance requirements.	A	Radionuclide emission calculations and air modeling for this project are presented in Appendix D. The model resulted is estimated at 5.3E-03 mrem/yr dose at the site boundary. Therefore, monitoring is not required.
	"Emission Monitoring" 40 CFR 61.93			
	"Emission Compliance" 40 CFR 61.94(a)			
<i>Action-Specific ARARs</i>				
Rules for the Control of Air Pollution in Idaho	"Fugitive Dust" IDAPA 16.01.01.650 and .651	Requires control of dust during excavation and removal of waste from the tanks.	A	Dust suppression measures will be implemented as necessary during the remedial action to minimize the generation of fugitive dust. These measures may include water sprays, keeping vehicle speeds to a minimum, and work controls during periods of high winds.
Requirements for Portable Equipment	IDAPA 16.01.01.500.02	Portable equipment for waste removal and treatment, if performed on-Site, and any portable support equipment must be operated to meet state and federal air emissions rules.	A	The use of any portable equipment will comply with IDAPA 16.01.01.500.02.

Table 4-4. (continued).

ARAR/TBC	Substantive Requirements	Reason	Relevancy (A or R&A) ^a	Compliance Strategy
RCRA – Standards Applicable to Generators of Hazardous Waste	“Hazardous Waste Determination” IDAPA 16.01.05.006 (40 CFR 262.11)	A HWD is required for soils excavated for disposal, waste from the tanks, and any secondary waste generated during remediation.	A	A HWD per MCPs will be completed. The INEEL WDDF will satisfy requirements of 40 CFR 262.11.
	“Manifest” ^b IDAPA 16.01.05.006 (40 CFR 262 Subpart B)	Establishes requirements for transporting hazardous waste to treatment and/or disposal site.	A	A manifest will be used to ship hazardous waste out of the TAN/TSF.
	“Pre-Transportation Requirements” ^b IDAPA 16.01.05.006 (40 CFR 262.30 – 262.33)			
RCRA – Standards for Owners and Operators of Hazardous Waste Treatment Storage and Disposal Units	“General Waste Analysis” ^b IDAPA 16.01.05.008 (40 CFR 264.13 (a)(1-3))	Analysis requirements apply to soils excavated for disposal, waste removed from the tanks, and secondary waste generated during remediation.	A	Samples will be obtained to determine whether any waste material generated meets the acceptance criteria at the disposal facility.
	“Security of Site” ^b IDAPA 16.01.05.008 (40 CFR 264.14)	Measures must be taken to restrict access to the site during waste removal and treatment, if performed, tank decontamination, and tank closure.	A	INEEL and WAG 1 security measures, such as access restrictions, will be implemented during remediation activities. Danger and Warning signs will be posted.
RCRA – Standards for Owners and Operators (continued)	“General Inspections” ^b IDAPA 16.01.05.008 (40 CFR 264.15)	Regular inspections must be performed during remediation.	A	Routine inspections will be conducted during and following remediation. The information obtained will be incorporated into the annual institutional control monitoring report. Additionally, post remediation inspections will be conducted as part of operations and maintenance activities.
	“Personnel Training” ^b IDAPA 16.01.05.008 (40 CFR 264.16)	All personnel must be trained who are involved in soil excavation, waste removal and treatment, if performed, decontamination, and tank closure.	A	Personnel will be trained in hazardous waste management requirements.

Table 4-4. (continued).

ARAR/TBC	Substantive Requirements	Reason	Relevancy (A or R&A) ^a	Compliance Strategy
	“Preparedness and Prevention” ^b IDAPA 16.01.05.008 (40 CFR 264 Subpart C)	Applies to soil excavation, waste removal, and treatment, if performed, and decontamination activities.	A	Emergency equipment will be available when handling/managing hazardous waste.
	“Contingency Plan and Emergency Procedures” ^b IDAPA 16.01.05.008 (40 CFR 264 Subpart D)	Applies to soil excavation, waste removal and treatment, if performed, and decontamination activities.	A	The substantive requirements of a contingency plan will be maintained.
	“Equipment Decontamination” ^b IDAPA 16.01.05.008 (40 CFR 264.114)	All equipment used during remediation must be decontaminated if hazardous waste is contacted.	A	Equipment will be decontamination to remove hazardous waste.
	“Use and Management of Containers” ^b IDAPA 16.01.05.008 (40 CFR 264.171 – 177)	Applicable to soils, tank waste, and any secondary hazardous-waste-generated remediation, which is managed in containers.	A	Only containers that are compatible with the waste generated will be used. Containers will be inspected routinely.
	“Tank Closure and Post Closure Care” ^c IDAPA 16.01.05.008 (40 CFR 264.197(a))	All waste and contaminated soils must be removed and all tank structures to be left in the ground must be decontaminated.	A	N/A
RCRA – Standards for Owners and Operators (continued)	“Miscellaneous Units (only if treatment is required to meet Land Disposal Restrictions)” ^b IDAPA 16.01.05.008 (40 CFR Subpart X (except 264.603))	Requirements for an on-Site treatment system for the tank waste, if required.	A	INEEL and WAG 1 security measures, such as access restrictions, will be implemented during remediation activities.

Table 4-4. (continued).

ARAR/TBC	Substantive Requirements	Reason	Relevancy (A or R&A) ^a	Compliance Strategy
RCRA – Land Disposal Restrictions	“Land Disposal Restrictions Treatment Standards” ^b IDAPA 16.01.05.011 (40 CFR 268.40(a)(b)(e))	The waste, tank, and piping must be treated, if necessary, to meet land disposal restriction criteria before disposal.	A	The RCRA waste management plan for WAG 1 OU 1-10 addresses the compliance strategy. Sampling will be conducted in accordance with the FSP. Any soil that falls within RCRA compliance that does not comply with land disposal restrictions will have to be treated prior to disposal.
	“Treatment Standards for Hazardous Debris” ^b IDAPA 16.01.05.011 (40 CFR 268.45(a)(b)(c)(d))		A	The RCRA waste management plan for WAG 1 OU 1-10 addresses the compliance strategy. Sampling will be conducted in accordance with the FSP. Any soil that falls within RCRA compliance that does not comply with land disposal restrictions will have to be treated prior to disposal.
	“Universal Treatment Standards” ^b IDAPA 16.01.05.011 (40 CFR 268.48(a))		A	The RCRA waste management plan for WAG 1 OU 1-10 addresses the compliance strategy. Sampling will be conducted in accordance with the FSP. Any soil that falls within RCRA compliance that does not comply with land disposal restrictions will have to be treated prior to disposal.
	“Alternative Treatment Standards for Contaminated Soil” IDAPA 16.01.05.011 (40 CFR 268.49)	Applies to any contaminated soil that is to be removed from the PM-2A Tank for disposal at an approved facility on the INEEL or off the INEEL.	A	The RCRA waste management plan for WAG 1 OU 1-10 addresses the compliance strategy. Sampling will be conducted in accordance with the FSP. Any soil that falls within RCRA compliance that does not comply with land disposal restrictions will have to be treated prior to disposal.

Table 4-4. (continued).

ARAR/TBC	Substantive Requirements	Reason	Relevancy (A or R&A) ^a	Compliance Strategy
	"CERCLA Off-Site Policy" ^b (40 CFR 300.440)		A	Any offsite TSP receiving hazardous waste will be certified to have offsite authority.
<i>To-Be-Considered</i>				
Radiation Protection of the Public and the Environment	DOE Order 5400.5 Chapter II (1)(a,b)	Order that limits the effective dose to the public from exposure to radiation sources and airborne releases.		Job safety analyses and/or radiological work permits will be prepared for tasks where there is the potential for exposures to radioactive contamination/materials. Radiation work permits will be used only as determined by the radiological controls technician, based on the INEEL <i>Radiological Control Manual</i> (INEEL 1996).
Institutional Controls	Region 10 Final Policy on the Use of Institutional Controls at Federal Facilities	Applies to contamination left in place or remaining above 1E-04 risk.		An institutional control plan will be developed after the submittal of institutional controls status monitoring report. An institutional control monitoring report is required on an annual basis.

a. A = Applicable, R&A = Relevant and Appropriate

b. This ARAR will not be applicable if a no-longer contained-in determination is approved by IDEQ for the site.

c. The compliance strategy for this ARAR will be addressed in the OU 1-10 Group 2 RD/RAWP.

NESHAPs = National Emission Standards for Hazardous Air Pollutants

IDAPA = Idaho Administrative Procedures Act

Table 4-5. Compliance with ARARs for the Fuel Leak site (WRRTF-13).

ARAR/TBC	Substantive Requirement(s)	Reason	Relevancy (A or R&A) ^a	Compliance Strategy
<i>Chemical-Specific ARARs</i>				
Rules for the Control of Air Pollution in Idaho	<p>"Toxic Substances" IDAPA 16.01.01.161</p> <p>"Demonstration of Preconstruction Compliance with Toxic Standards" IDAPA 16.01.01.210</p> <p>"Toxic Air Emissions" IDAPA 16.01.01.585 and .586</p>	<p>The release of carcinogenic and non-carcinogenic contaminants into the air must be estimated before start of excavation, controlled, if necessary, and monitored during remediation.</p>	A	Estimates of emissions during remediation will be generated by results of prior soil sampling. If emission levels exceed allowable limits, appropriate controls and monitoring will be implemented.
Idaho Groundwater Quality Rule (Primary Drinking Water Standards)	IDAPA 16.01.11.200 (40 CFR 141)	Any contamination remaining at the site after remediation must not adversely affect groundwater quality; groundwater quality standards must be met.	A	The levels of contamination remaining in the bottom of excavation will dictate the requirements for groundwater monitoring.
Petroleum Release Risk-Based Corrective Action	IDAPA 16.01.02.852	After additional sampling, an analysis based on the Idaho RBCA criteria will be performed to determine the cleanup criteria for the petroleum-contaminated soils.	A	Data may be used to perform a risk assessment to determine if the need for groundwater monitoring is necessary, and if so, the constituents to be monitored.
RCRA – Identification and Listing of Hazardous Waste	"Exclusions" IDAPA 16.01.05.005 (40 CFR 261.4(b)(10))	Any excavated soils that fail the toxicity characteristic leaching procedure for organics (D018-D043) will not be considered hazardous waste.	R&A	Any excavated soil that fails the TCLP for organics (D018-DO43) is excluded from RCRA requirements, and is subject to the requirements of 40 CFR 280 (see 40 CFR 261.4(b)10) (see Appendix D Hazardous Waste Determination).

Table 4-5. (continued).

ARAR/TBC	Substantive Requirement(s)	Reason	Relevancy (A or R&A) ^a	Compliance Strategy
Action-Specific ARARs				
Rules for the Control of Air Pollution in Idaho	"Fugitive Dust" IDAPA 16.01.01.650 and .651	Requires control of dust generated during excavation and transport of soil	A	Dust suppression measures will be implemented as necessary during the remedial action. These measures may include water sprays, keeping vehicle speeds to a minimum, and work controls during periods of high wind.
RCRA – Standards Applicable to Generators of Hazardous Waste	"Hazardous Waste Determination" IDAPA 16.01.05.006 (40 CFR 262.11)	A HWD must be made for any waste generated during excavation.	A	A hazardous waste determination per MCPs will be completed. The INEEL WDDF will satisfy requirements of 40 CFR 262.11.
To-Be-Considered				
Institutional Controls	Region 10 Final Policy on the Use of Institutional Controls at Federal Facilities	Applies to contamination left in place or remaining above 1E-04 risk.		An institutional control plan will be developed after the submittal of the institutional controls status monitoring report. An institutional control monitoring report is required on an annual basis.
<p>a. A = Applicable, R&A = Relevant and Appropriate</p> <p>NESHAPs = National Emission Standards for Hazardous Air Pollutants</p> <p>IDAPA = Idaho Administrative Procedures Act</p>				